

[illegible]

All kappa genes:	Jk1 gene	/	Nci1 / PCR primer site	/
Asp Pro	TrpThrPhreGldngLgThryValGluLeuLys	(SEQ ID NO: 2327)		
NNN--CCT	TGGAGTCCTGGCCAGGCACAGGTGGAAATCGAGGCCGACGTGGTGCAGGAATTTCG	(SEQ ID NO: 2328)		
GNNNN--G	GAACTCGAAGCCGGTTCCTGGTTCACCTTTAGTTTTCGGCGCGTCACACTCAGTGTTTTC	(SEQ ID NO: 2329)		
(except VK L20)				

/ JK2 gene / (SEQ ID NO: 2330)
 TyrThrPheClyGlyGlyThrTyrLeuGluIleLeys / (SEQ ID NO: 2331)
 TACACTTTCGCCAGGAGCAACCTGGAGATCAAA / (SEQ ID NO: 2332)
 GAATGTGAAACCGGCCCCCTCGTTCACCTCTAGTT / (SEQ ID NO: 2333)

/	JK3 gene		(SEQ ID NO: 2333)
/	PheThrPheGlyProGlyThrLysValAspIleLeys		(SEQ ID NO: 2334) continued as for JK1
TTCACCTTCCGCCCTCGGCAGAAATGGATATCAA			(SEQ ID NO: 2335)
GGAAGTGAAACCGCGGACCCTGGTTACCTATAGTT			

JK4 gene	JK4 gene
LeuThrPheClyGlyGlyThyLysValGluLeuLys	(SEQ ID NO: 2336)
CTCATCTTTCGGCGGAGACCAAGTTCGATCAAA	(SEQ ID NO: 2337)
GAGATGAAGCGCCCTCCCTTCGCTTCACCTCATTT	(SEQ ID NO: 2338)

Lambda 3 genes:	DPL16 (+v381)+ / +v318	Ser	His	Val16PheGlyGlyGlyThrybysLeuThrValLeu	NotI / PCR primer site	Seq ID NO: 2339	Seq ID NO: 2340	Seq ID NO: 2341
		NNN-----CAT		GTGATTATTCGGGGAGGACCAAGCTGCAGCTCTTCTAGTGGCGGACAGTGTGAGTCCAAAGATTTCG				
		GGNN-----G		TACAACATTAATGGCCGCTCCCTGTCGTCTGCGACAGATGCGCGGAGTCACTGCTGCTTCTTCAAGC				

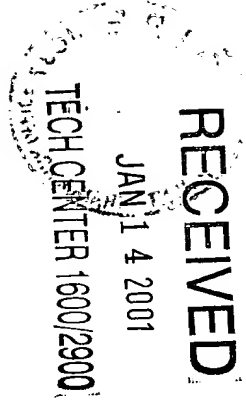
Lambda 3 gene: /DPE23 (=VL3.11)/ for DPE23+VL3.1
Ser Ala GTG--- continued as for JL2/3
NNN-----GCA GTCAC---
GGNN-----C

Lambda 1 genes: / DPL2+DPL3 / Gly
Gln NNN-----GGT
GGNN-----C
for DPL2+DPL3 continued as for JL2/3
GTG---
CACAC---

Lambda 2 gene: / DPL11 /
 Gln Leu
 NNN-----CTC GTG---
 CGNNN-----G AGCAC---

continued as for JL2/3

FIGURE 33



All kappa genes:
 Asp Pro
 NNN-----CCT
 GGN-----G
 (except VK L20)

Lambda 3 genes:
 Ser His
 NNN-----CAT
 GGN-----G

Lambda 3 gene:
 /DPL23 (=VL3.1) /
 Ser Ala
 NNN-----GCA
 GGN-----C

Lambda 1 genes:
 /DPL2+DPL3 /
 Gln Gly
 NNN-----GCT
 GGN-----C

Lambda 2 genes:
 / DPL11 /
 Gln Leu
 NNN-----CTC
 GGN-----G

Lambda 3 genes:
 / *v318 /
 Ser His
 NNN-----CAT
 GGN-----G

Lambda 3 gene:
 /DPL23 (=VL3.1) /
 Ser Ala
 NNN-----GCA
 GGN-----C

Lambda 1 genes:
 / DPL2+DPL3 /
 Gln Gly
 NNN-----GCT
 GGN-----C

Lambda 2 genes:
 / DPL11 /
 Gln Leu
 NNN-----CTC
 GGN-----G

JK1 gene / NotI / PCR primer site /
 TTTThrPheGlyGinglyThrLysValGluLeuLys (SEQ ID NO: 2327)
 TGGAGTTTCGGCAGGACCAAGGTGGATCAACAGCCGCGGTGGATGTCMAAGATTTCG (SEQ ID NO: 2328)
 GAACCTCAAGCCGGTTCCTGGTGTCCACCTTTAGTTTGGCGCGTCACACTCAGGTTCCTAAAGC (SEQ ID NO: 2329)

JK2 gene /
 TyrThrPheGlyGinglyThrLysLeuGluLeuLys (SEQ ID NO: 2330)
 TACACTTTTGGCAGGACCAAGCTGGAGATCAA (SEQ ID NO: 2331) continued as for JK1
 GAATGTGAACACCGGTCCTCCCTGGTTCGACCTCTAGTTT (SEQ ID NO: 2332)

JK3 gene /
 PheThrPheGlyProGlyThrLysValAspIleLys (SEQ ID NO: 2333)
 TTCACCTTTGGCCCTGGCAGCGGACCAAGTGGATCAAA (SEQ ID NO: 2334) continued as for JK1
 GAAAGTGAAGCCGGGAGCCCTGGTGTTCACCTATAGTTT (SEQ ID NO: 2335)

JK4 gene /
 LeuThrPheGlyGlyGlyThrLysValGluLeuLys (SEQ ID NO: 2336)
 CTCACCTTTGCGGAGGACCAAGCTGGAGATCAA (SEQ ID NO: 2337) continued as for JK1
 GAGATGTGAAGCGCGCTCCCTGGTGTCCACCTCTAGTTT (SEQ ID NO: 2338)

NotI / PCR primer site /
 ValValPheGlyGlyGlyThrLysLeuThrValLeu (SEQ ID NO: 2339)
 GTGTGATTTCGGGAGGACCAAGCTCAGCGCTCTAGTGGCGGATGTGGATGTCMAAGATTTCG
 TACACATAAGCCGCTCCCTGGTGTGACTGGCAGATGCGCGGCTCACACTCAGGTTCCTAAAGC

for DPL23+VL3.1
 GTG--- continued as for JL2/3
 GTCAC---

for DPL2+DPL3
 GTG--- continued as for JL2/3
 CACAC---

for DPL11
 GTG--- continued as for JL2/3
 AGCAC---

FIGURE 33

IGF-5 (SEQ ID NOS 2193 (DNA) and 2194-2199 (protein), respectively, in order of appearance) 139
 GACTACAAG ACTCGTGGT GAATTCG TATGTCCTG GCGTGCCTTA GGTTCAGAT TCTTCGTGG CCGTTCCCTA AGGATTGCT TCAGATGAA GATATTTT ATTCTTGTG GTCTAGTTG GCGGCCGA
 D Y K D S W L N F R Y V A G R A Q V S D S S V A V S . G L C S D E R Y F L F V V G Q F G G R
 T T K T R G . I F G H L L G V L R F Q I L L W P F P K D C V Q M K D I F Y S L L A S L A A A
 L Q R L V V E F S V C C W A C L G F R F F C G R F L R I V F R . K I F P I R C W L V W R P

IGF-8 (SEQ ID NOS 2200 (DNA) and 2201-2205 protein, respectively, in order of appearance) 100
 GACTACAAG ACCGGTTCG GGTCTGCTG GGTCTGGG GGTATGAGC CTTTATGCG GTCTTCCTG ATGCTGATTG GTCTGGGTC TCGGCCGCA
 D Y K D A V A A A V A P W G . . A F L W A S P Y A D W S W V C G R
 T T K T R L R L L L L L G G D E P F Y G L L R H L I G R G S A A A
 L Q R R G C G C C C S L G V M S L F H G F S V C . L V V G L R P

IGF-G5 (SEQ ID NOS 2206 (DNA) and 2207-2210 (protein), respectively, in order of appearance)
 GACTACAAG ACTGTTGGT TTGCTGGGT GTGATGATTA GCTTTTCTG TTAGGGGT CGGTGGCT TTTACTCAG CGTTGGCTG CTGTTGGT GCGGCCGA 139
 D Y K D W L V C L G V M I S F F C L G G R C G F L L S V G C L V V C P Q C F F G V W C G G R
 T T K T G W F A W V . . L A F S V Q G V G V A F Y S A L A A L L C A H S A S L V C G A A A A
 L Q R L V G L L G C D D Q L F L F R G S V W L F T Q R W L P C C V P I V L L W C V V R R P

IGF-7 (SEQ ID NOS 2211 (DNA) and 2212-2217 (protein), respectively, in order of appearance) 112
 GACTACAAG ACCGGATTG GGTCTGTAG CTGATTAGT TGGGTGGA GGGATGATG ATGGCTGAT GGGTTTATG CGTTTTCAT GCGCTGGCT GCGGCCGCA CA
 D Y K D P D W V L Q L I S L G L E G M Q I G . W V L C V F D G A G W G G R
 T T K T R I G C C S . L V W G W R G C R L A D G F Y A F L M A L A G A A A
 L Q R P G L G V V A D Q F G V G G D V D W L M G F M R F . W R W L G R P

FIGURE 19



IGF-5 (SEQ ID NOS 2193 (DNA) and 2194-2199 (protein), respectively, in order of appearance)
GACTACAAG ACTCGTGGT GAATTTCGG TATGTGCTG GCGGTGCTTA GTTTCAGAT TCCTCTGGG CGGTTCCTCA AGGATTGCT TCAGATGAA GATATTTT ATTCTTTT GGCTAGTTT GCGGCCGCA 139
D Y K D S W L N F R Y V A G R A Q V S D S V A V S . G L C S D E R Y F L F V V G Q F G G R
T T K T R G . I F G H L L G V L R F Q I L L W P F P K D C V Q M K D I F Y S L L A S L A A A
L Q R L V V E F S V C C W A C L G F R F F C G R F L R I V F R . K I F F I R C W L V W R P

IGF-8 (SEQ ID NOS 2200 (DNA) and 2201-2205 (protein), respectively, in order of appearance)
GACTACAAG ACCGGTGGT GCGTCTGTT GCTCTTGGG GGTGATGAGC CTTTATG GCTTCTCGT ATGCTGATTG GTGCTGGCTC TCGGCCGCA 100
D Y K D A V A A A V A P W G . . A F L W A S P Y A D W S W V C G R
T T K T R L R L L L L L L G G D E P F Y G L L R H L I G R G S A A A
L Q R R G C G C C C S L G V M S L F H G F S V C . L V V G L R P

IGF-65 (SEQ ID NOS 2206 (DNA) and 2207-2210 (protein), respectively, in order of appearance)
GACTACAAG ACTGGTGGT TTGCTTGGT GTGATGATTA GCTTTTCTG TTTAGGGGT CCGTGGCT TTTACTCAG CATTGGCTG CTGTGTGTG GCCATAGT CTCTTTGCT GTGTGTGCT GCGGCCGCA 139
D Y K D W L V C L G V M I S F F C L G G R C G F L L S V G C L V V C P Q C F F G V W C G G R
T T K T G W F A W V . . L A F S V Q G V G V A F Y S A L A A L L C A H S A S L V C G A A A A
L Q R L V G L L G C D D Q L F L F R G S V W L F T Q R R W L P C C V P I V L L W C V V R R P

IGF-7 (SEQ ID NOS 2211 (DNA) and 2212-2217 (protein), respectively, in order of appearance)
GACTACAAG ACCGGATTG GGTGTGTAG CTGATTGTT TGGGTGGA GGGATGAG ATTGGCTGAT GGGTTTATG CGTTTTCAT GCGCTGGCT GCGGCCGCG CA 112
D Y K D P D W V L Q L I S L G L E G M Q I G . W V L C V F D G A G W G G R
T T K T R I G C C S . L V W G W R G C R L A D G F Y A F L M A L A G A A A
L Q R P G L G V V A D Q F G V G G D V D W L M G F M R F . W R W L G R P

FIGURE 19

